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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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| 09/214,519 | 01/07/99 | HASHIZUME | T 101850 |

MM92/0908

EXAMINER

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ART UNIT

PAPER NUMBER

2858

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

| | |
|-------------------------------|---------------------------------|
| Application No. 09/214,519 | Applicant(s) Hashizume et al |
| Examiner Etienne LeRoux | Group Art Unit 2858 |

Responsive to communication(s) filed on Aug 1, 2000

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle 835 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

Claim(s) 1-19 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

Claim(s) _____ is/are allowed.

Claim(s) 1-19 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Response to Continued Prosecution Application

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “partition that surrounds said optical modulation element via an air layer and thereby separates said optical modulation element from said light source and said projection unit” of claim 14 and 19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 8 (amended) is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 (amended) recites the limitation “said transparent plate being made of the substrate material used in making said substrates.” The material used to make the substrate is not clearly defined.

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Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4, 6 - 9 (amended) are rejected under 35 U.S.C.102(b) as being anticipated by Yamada et al.

Regarding claims 1 and 4 (amended), Yamada et al. disclosean optical modulation element[Fig 5, #5] a transparent plate [Fig 5, #3] secured to the optical modulator a projection unit [Fig.2, #209].

Regarding claims 2 and 9 (amended), Yamada et al. disclosea polarizer [Fig 5, #9] bonded to the transparent plate.

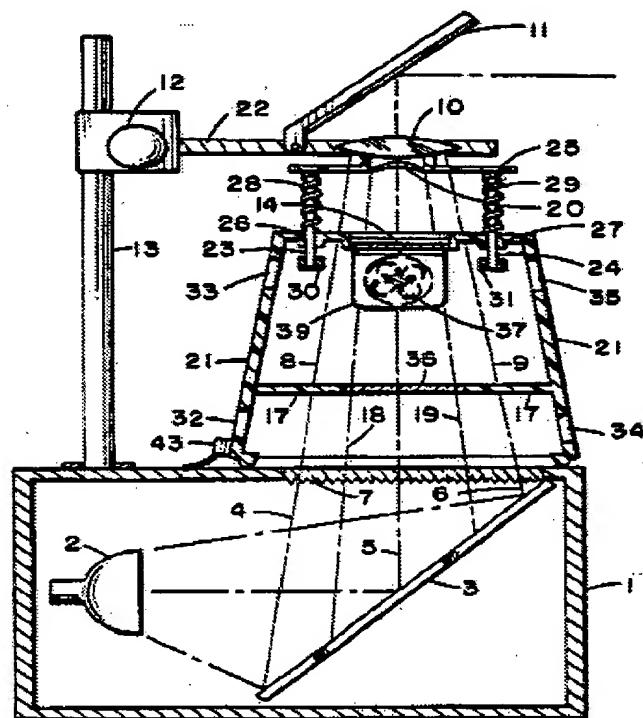
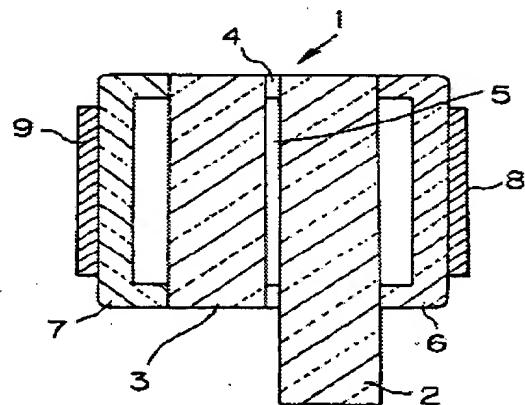
Regarding claim 6 (amended), Yamada et al. disclose the transparent plate [Fig 5, #3] thickness is larger than the focal length of the projection lens [Fig 2, #209].

Regarding claim 7 (amended), Yamada et al disclose the transparent plate is made of resin [Col 6, line 60].

Regarding claim 8 (amended), as best the examiner is able to ascertain, Yamada et al disclose a polarizer [Fig 5, #9] and a pair of substrates [Fig 5, #2 and #3]

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FIG. 5



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Claims 14 - 16 (amended) are rejected under 35 U.S.C. 102(b) as being anticipated by Williams et al.

Regarding claim 14 (amended), Williams et al disclose a light source [Fig 1, #2]an optical modulation element [Fig 1, #14]a projection unit that magnifies and projects the light flux [Fig 1]a partition that surrounds the optical modulator [Fig 1, #21]the partition having a transparent plate [Fig 1, #36]a light outgoing window that emits light flux from the optical modulator [Fig 1]

Regarding claim 15 (amended), Williams et al. disclose a fan [Fig 1, #37].

Regarding claim 16 (amended), Williams et al. discloses a polarizer [Col 5, line 58] bonded to a transparent plate [Fig 1, #36]

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 (amended) is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. in view of Hashizume et al.

Regarding claim 5 (amended), the difference between Yamada et al. and the claimed invention is the antireflection film on the surface of the transparent plate. Hashizume et al.

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disclose an antireflection film [Fig 12]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yamada et al. to include the antireflection film as disclosed by Hashizume et al. The ordinary artisan would have been motivated to modify Yamada et al. as above for the purpose of eliminating reflections from the transparent plate.

7. Claims 3 and 10 (amended) are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. in view of Yamazaki et al.

Regarding claims 3 and 10 (amended), the difference between Yamada et al. and the claimed invention is the transparent plate being treated for electrostatic protection. Yamazaki discloses a transparent substrate being electrostatically protected [Col 3, lines 1-35]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yamada et al to include the electrostatic protection as disclosed by Yamazaki et al. The ordinary artisan would have been motivated to modify Yamada et al as above for the purpose of protecting the optical modulator against excessive electrostatic voltage.

8. Claims 11 - 13 (amended) are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. in view of Fujimori et al.

Regarding claims 11 - 13 (amended), the difference between Yamada et al. and the claimed invention is the mounting member, the color synthesizing prism, a fixed frame plate in contact with the color synthesizing prism and an intermediate frmae plate. Fujimori et al. disclosea mounting member [Fig 5]a color synthesizing prism [Fig 5, #22]a fixed frame plate

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[Fig 5, #54] in contact with the color synthesizing prism [Fig 5, #22]an intermediate frame plate [Fig 5, #55]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yamada et al to include the above components as taught by Fujimori et al. The ordinary artisan would have been motivated to modify Yamada et al. as above for the purpose of securing the transparent plate and the polarizer to the color synthesizing prism.

Regarding claim 12 (amended), Fujimori et al. disclose the mounting frame plate being made of resin [Col 10, line 15].

Regarding claim 13 (amended), Fujimori et al. disclose a metal mounting frame [Col 10, line 43].

Claim 17 (amended) is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. in view of Yamazaki et al.

Regarding claim 17 (amended), the difference between Williams et al. and the claimed invention is the transparent plate being treated for electrostatic protection. Yamazaki discloses a transparent substrate being electrostatically protected [Col 3, lines 1-35]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Williams et al. to include the electrostatic protection as disclosed by Yamazaki et al. The ordinary artisan would have been motivated to modify Williams et al. as above for the purpose of protecting the optical modulator against excessive electrostatic voltage.

Claims 18 and 19 (new) are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. and further in view of Williams.

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The examiner may take official notice of facts outside of the record which are capable of instant and unquestionable demonstration as being "well-known" in the art. Yamada et al and further in view of Williams disclose the claimed invention except for a power supply unit, an interface unit, a control circuit that controls the optical modulation element, an outer casing that accomodates the light source, the optical modulation element, the partition, the power supply unit, the interface unit, and the control circuit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the above components since it was known in the art that the above components are required for a conventional optical modulation element and projection display device. *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970).

Applicant may consider overcoming the above assertion of obviousness by demonstrating that provision of the above components achieves unexpected results relative to the prior art.

In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

Furthermore, if Applicant has obtained unexpected results relative to the prior art, Applicant is required to show "that the difference in results is in fact unexpected and unobvious and of both statistical and practical significance." *Ex parte Gelles*, 22 USPQ2d 1318, 1319 (Bd. Pat App. & Inter, 1992)

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Response to Arguments

9. Applicant's arguments filed 8/1/00, Paper No. 13, have been fully considered but they are not persuasive.

10. Applicant states on page 6 "this substrate material is clearly defined in claim 8." Claim 8 recites the limitation, "said transparent plate being made of the substrate material used in making said substrates." One of ordinary skill in the art is able to select a plurality of different materials suitable for making a substrate. It is impossible to determine which material Applicant is claiming based on the description in claim 8. Examiner asserts that claim 8 is indefinite.

Applicant states on page 6 "Yamada does not disclose or suggest an optical modulation element and a transparent plate formed on at least one surface of the optical modulation element. In fact in Yamada there is no optical modulation element." Examiner counters by directing Applicant to supra office action which clearly identifies the elements. Additionally, for Applicant's convenience, the claimed elements with equivalent teachings by Yamada are given below.

Yamada in col. 1, line 10 - 45 discusses a conventional liquid crystal display device. Furthermore, Yamada et al in col 1, discloses a TFT device for a liquid crystal device. Examiner notes that Applicant discloses in the Specification, page 20, line 9-10, "[i]n the modulation devices of this embodiment, for example, a polysilicon TFT may be used as a switching element." Furthermore, Yamada teaches, col. 3 lines 65-67, "it is apparent that the application of the present invention is not limited only to the active matrix type liquid crystal display device but the invention may be applied to any other various structures such as a simple matrix type LCD." Yamada teaches a

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transparent plate [Fig 5, 3] formed on the surface of the optical modulation element [Fig 5, 5].

Examiner is confident Yamada reads on the claimed optical modulation device.

Applicant states on page 6, “Williams does not disclose or suggest a projection unit that magnifies and projects the light flux modulated by the optical element, and a partition that surrounds the optical modularization element via an air layer and thereby separates the optical modulation element from the light source and projection unit.” Williams teaches in col 2, line 66, “[a]ny device capable of being displayed by an LCD device can be optically projected by the invention.” Examiner respectfully disagrees with Applicant that Williams does not teach a projection unit. Furthermore, Examiner is unable to address remainder of supra language as it does not appear to be a claim limitation.

Applicant states on page 7, “Hashizume does not disclose or suggest a transparent plate.” Examiner maintains above is not relevant as Hashizume was cited for teachings regarding antireflection film. Applicant is referred to Yamada et al, Fig 4, 16 and 17, and Fig 5, 2, which clearly show transparent plates. Examiner is not persuaded by Applicant's argument.

Applicant states on page 7, “Yamazaki does not disclose or suggest transparent plates.” Examiner cited Yamazaki in the first office action because Yamazaki teaches a transparent plate being electrically protected. Applicant is referred to Yamada et al, Fig 4, 16 and 17 which clearly shows transparent plates. Examiner respectfully disagrees with Applicant's reasoning.

Applicant states Yamazaki does not disclose or suggest a partition. Applicant is referred to the first office action which states that Williams et al teach a partition member Fig 1, 21.

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Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne (Steve) LeRoux whose telephone number is (703) 305-0620.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahić, can be reached at (703) 308-1436.

Any inquiry of a general nature relating to the status of this application or processing procedure should be directed to the receptionist whose telephone number is (703) 308-0956.

Etienne LeRoux

September 7, 2000


Safet Metjahić
Supervisory Patent Examiner
Technology Center 2800